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A NEW SPECIES OF *HYLA* (AMPHIBIA, SALIENTIA) FROM THE VENEZUELAN GUAYANA

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ABSTRACT. A small species of *Hyla*, *H. rodriguezi*, is described from the wet region of La Escalera, Estado Bolívar, Venezuela. The new form is characterized by having a large, well defined tympanum, about $\frac{7}{8}$ the size of the eye; nearly webless fingers; $\frac{3}{4}$ webbed toes; speckled throat and orange-red areas in the thighs. It may be related to the *Hyla leprieurii* group but it is also similar to *Hyla grandisonae* Goin, from which it differs in coloration and in other details.

Among the new frogs collected by the author in the region of La Escalera, in southeastern Venezuela, there is a small species of a bromelicolous form that appears to be new to science. The new species is named *Hyla rodriguezi* in honor of Gilberto Rodríguez, of the Instituto Venezolano de Investigaciones Científicas, who made possible the expedition during which this and many other interesting species were collected. Dr. Rodríguez spared no effort in facilitating the author's investigations of the frogs of the Venezuelan Republic.

During this and other investigations pertaining to the Venezuelan frog fauna, the author has utilized the facilities and collections of the Museum of Comparative Zoology at Harvard. He is most thankful to the Curator of Herpetology, Dr. Ernest Williams, for his cooperation and unfailing willingness to be interrupted and consulted at any time.

HYLA RODRIGUEZI sp. n.

Type. M.C.Z. 64740, ♂, Paso del Danto, Región de La Escalera, ca. 1400 m above San Isidro, road from El Dorado to Sta. Elena de Uairén, Estado Bolívar, Venezuela. Coll. Juan A. Rivero and Juan Pulido, 26 March 1968.

Diagnosis. A small *Hyla* with bony head; strong, straight canthus rostralis; almost vertical, concave loreal region; anteriorly converging vomerine teeth; large tympanum, about $\frac{7}{8}$ the size of the eye; tubercular dorsal surfaces (males?); red (alive) or white (preserved) areas on the thighs and speckled throat.

Description. Head slightly broader than long; snout short, rounded, concave above; nostrils forming a truncate tip; canthus rostralis strong and well defined; loreal region vertical, concave; interorbital space as broad as an upper eyelid; vomerine odontoids anteriorly converging, extending from level of palatines to about middle of inner margin of choanae; choanae moderate, oblique; tympanum large, distinct, about $\frac{7}{8}$ the size of the eye; larger disks much smaller than tympanum; eye diameter as long as distance between eye and nostril; a line of whitish tubercles from elbow to wrist; metacarpal tubercles not well differentiated; subarticular tubercles well defined; fingers almost free, the first swollen at the base and with an elongated brown pad which covers $\frac{2}{3}$ of its inner side; first finger not extending much beyond first subarticular tubercle of second; second finger shorter than last; a small tubercle at the heel; no tarsal fold; an elongated inner and a flattened, rounded, and less distinct outer metatarsal tubercle; subarticular tubercles of toes prominent; toes about $\frac{3}{4}$ webbed (taken in order from first to fifth, the following phalanges are free of web: 2; $1\frac{1}{2}$; $1\frac{1}{3}$; $2\frac{1}{3}$; $1\frac{1}{3}$); heel of the adpressed hind limb extending to the anterior corner of the eye. Skin above distinctly granular, most of the granules having a corneous tip; on the posterior half of the back, the anterior loreal region, the arms, and tibial segments, the granules become larger tubercles. Below, smooth on the chin and chest; finely granular on the throat; coarsely granular on the belly and postero-ventral aspect of thighs; one almost imperceptible furrow on each side of the throat.

Color. Above, dark brown, with two somewhat lighter and ill-defined bands from behind the eyes and over the level of the shoulders to near the sacral region; a dark, ill-defined streak along the flanks below the light brown band; other longitudinal, light brown spots can be noticed on the dorsum; a whitish, ill-defined spot or line under the eye, in front of the tympanum; disk of first finger white, of second finger half white and half brown; posterior portion of arm and axillar membrane white; flanks below dark brown streak white, this color extending dorsally to the illea on the posterior end; thighs pink, speckled and spotted with brown; rest of hind limbs and fore limb with transverse blotches or bars; web

pink. Below, creamish white, uniform, except for the sides of the throat and lower lip, which are freckled with purplish brown.

The living animal appeared to be of a solid brown color with orange areas on the thighs, white forearms (posterior part) and axilla, creamish venter with purplish specks on the throat, rosy hind limbs (underneath), and with cream points along the forearm and at the sides of the anus.

Measurements (in mm). Snout-vent 34.5; head length 11.02; head breadth 11.2; femur 16; tibia 17.7; foot 12.4.

Paratypes. The paratypes are U.P.R.-M.¹ 02207-02012, all from the same locality and with the same data as the type. They vary from 21.6 to 35.2 mm in snout-vent length. In some specimens the heel of the adpressed hind limb may extend to between eye and nostril; in a few the web is less extensive than in the type, and the feet may perhaps be said to be not more than $\frac{2}{3}$ webbed. The skin may be almost smooth in some of the smaller specimens.

There is some variation in coloration, although the pattern is rather similar in most specimens. In a few examples the longitudinal bands or spots are darker, not lighter than the background color, and in the smallest individual the background color is gray and there are many short longitudinal streaks on the dorsum. In all specimens, there is a light-colored spot or line in front of the tympanum, but in some it is very diffused, and in one it extends anteriorly along the upper lip. In preserved material, the ventral color is as described for the type, except for the fact that the freckles of the throat may not be limited to the margins and may also extend to the central area. In living animals the color is more variable, and the throat may be yellow with purplish freckles while the rest of the venter is cream or lighter yellow. Sometimes there is almost no orange on the thighs, while at others the orange becomes red and may extend, on the ventral side, to the tibial and metatarsal segments and the foot. The lower side of the forearm may also be orange or red.

Habitat and relationships. The place where *H. rodriguezi* was collected is probably one of the雨iest in Venezuela, and when it is not raining it is usually foggy and misty. The vegetation can probably be classified as the wet montane type, and there is a great abundance of epiphytes, the Aracean *Philodendron nobile* being particularly evident.

Hyla rodriguezi was collected in ground bromeliads (apparently of the genus *Vriesea*) that grow along the road bank at an elevation

¹ University of Puerto Rico — Mayagüez.

of about 1400 m. There was never more than one specimen in any one bromeliad, and only once was there another species of frog (*Hyla minuta*) in the same plant. All were collected at dusk. At night, no sound was heard in the area except that of a new species of *Eleutherodactylus* (Rivero, in press), and occasionally, the whistling call of *Leptodactylus rugosus*.

This species is well characterized, and if I were to relate it to any other known species, it would probably be to the *Hyla lepteurii* group. However, *Hyla rodriguezi* is a smaller species with a shorter snout, less webbing between the toes, and inconspicuous vocal sacs. It is also somewhat similar to *Hyla alboguttata*, but the head of *Hyla rodriguezi* is more bony, its canthus straighter and better defined, its feet less webbed, and its color different. The speckled coloration of the throat of *H. rodriguezi* seems to be very characteristic of this species.

Hyla grandisonae Goin (type locality, Mazaruni Forests, Guyana) agrees in many characters with *H. rodriguezi*, but on closer examination it is found that the two species may not even be too closely related. In *H. grandisonae*, the heel of the adpressed limb reaches almost to the nostril, the skin above is smooth, the ventral color is gray, and the species is said to be related to *Hyla parviceps* Boulenger, *H. rondoniae* Bokermann and *H. bokermannii* Goin, three species that do not seem to be close to *Hyla rodriguezi*.

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Fig. 1. A, B, *Hyla rodriguezi*, type, M.C.Z. 64740, from Paso del Danto, region of La Escalera, Estado Bolívar, Venezuela. A. Dorsal view. B. Lateral view. C. D. *Hyla rodriguezi*, paratype, U.P.R.-M. 02209, from the same locality. C. Enlarged lateral view of head region to show common dorsolateral pattern. D. Ventral view.